

What is claimed is:

1. A method of automatic permanent virtual circuit connection activation, the method comprising:
 - detecting initiation of communication between a first and a second network element at a first reference point;
 - receiving at least one virtual circuit identifier of the first network element;
 - learning at least one virtual circuit identifier of the second network element; and
 - creating a translation connection between the first and second network elements.
2. The method of claim 1, further comprising validating the at least one virtual circuit identifier of the first network element as defined by a valid permanent virtual circuit database.
3. The method of claim 1, further comprising validating the at least one virtual circuit identifier of the second network element as defined by a valid permanent virtual circuit database.
4. The method of claim 1, wherein learning at least one virtual circuit identifier of the second network element, comprises:
 - monitoring traffic between the first and second network elements for any type of virtual circuit identifier transmitted from the second network element; and
 - identifying the at least one virtual circuit identifier of the second network element in the traffic.
5. The method of claim 1, further comprising:
 - monitoring a permanent virtual circuit created by the translation connection;
 - when the at least one virtual circuit identifier of the second network element changes, creating a new translation connection using the changed virtual circuit identifier of the second network element.

6. The method of claim 5, further comprising validating the changed virtual circuit identifier of the second network element as defined by a valid permanent virtual circuit database.
7. The method of claim 5, further comprising:
when the number of changes of virtual circuit identifiers of the second network element have reached a predetermined number of changes terminating the translation connection.
8. The method of claim 1, further comprising:
monitoring the first reference point and a second reference point, that is located on the network side of the first network element, for activity;
when no activity is detected at the first or second reference points starting a timer;
and
when the timer has reached a predetermined amount of time terminating the translation connection.
9. The method of claim 1, wherein receiving at least one virtual circuit identifier of the first network element comprises receiving a message from an associated network containing the at least one virtual circuit identifier of the first network element.
10. The method of claim 1, wherein learning at least one virtual circuit identifier of the second network element comprises receiving traffic from the second network element containing the at least one virtual circuit identifier of the second network element and storing the identifier.
11. A method of automatic permanent virtual circuit connection activation, the method comprising:
detecting initiation of communication between a first and a second network element at a first reference point;

- learning at least one virtual circuit identifier of the first network element; learning at least one virtual circuit identifier of the second network element; and creating a translation connection between the first and second network elements.
12. The method of claim 11, further comprising validating the at least one virtual circuit identifier of the first network element as defined by a valid permanent virtual circuit database.
13. The method of claim 11, further comprising validating the at least one virtual circuit identifier of the second network element as defined by a valid permanent virtual circuit database.
14. The method of claim 11, further comprising:
monitoring a permanent virtual circuit created by the translation connection; and
when the at least one virtual circuit identifier of the second network element changes, creating a new translation connection using the changed virtual circuit identifier of the second network element.
15. The method of claim 14, further comprising validating the changed virtual circuit identifier of the second network element as defined by a valid permanent virtual circuit database.
16. The method of claim 14, further comprising:
when the number of changes of virtual circuit identifiers of the second network element have reached a predetermined number of changes terminating the translation connection.
17. The method of claim 11, further comprising:
monitoring the first reference point and a second reference point, that is located on the network side of the first network element, for activity;

when no activity is detected at the first or second reference points starting a timer;
and

when the timer has reached a predetermined amount of time terminating the
translation connection.

18. The method of claim 11, wherein learning at least one virtual circuit identifier of
the first network element comprises receiving traffic from the first network element
containing the at least one virtual circuit identifier of the first network and storing the at
least one virtual circuit identifier of the first network element.

19. The method of claim 11, wherein learning at least one virtual circuit identifier of
the second network element comprises receiving traffic from the second network element
containing the at least one virtual circuit identifier of the second network element and
storing the at least one virtual circuit identifier of the second network element.

20. A method of automatic permanent virtual circuit connection activation, the
method comprising:

detecting initiation of communication between customer premises equipment and
a network element at a first reference point;

receiving at least one virtual circuit identifier of the network element;

learning at least one virtual circuit identifier of the customer premises equipment;
and

creating a translation connection between the customer premises equipment and
the network element.

21. The method of claim 20, further comprising validating the at least one virtual
circuit identifier of the network element as defined by a valid permanent virtual circuit
database.

22. The method of claim 20, further comprising validating the at least one virtual circuit identifier of the customer premises equipment as defined by a valid permanent virtual circuit database.
23. The method of claim 20, further comprising:
monitoring a permanent virtual circuit created by the translation connection;
when the at least one virtual circuit identifier for the customer premises equipment changes, recreating the translation connection using the changed virtual circuit identifier for the customer premises equipment.
24. The method of claim 23, further comprising validating the changed virtual circuit identifier for the customer premises equipment as defined by a valid permanent virtual circuit database.
25. The method of claim 23, further comprising:
when the number of changes of virtual circuit identifiers of the customer premises equipment have reached a predetermined number of changes terminating the translation connection.
26. The method of claim 20, wherein receiving at least one virtual circuit identifier of the network element comprises receiving a message from an associated network containing the at least one virtual circuit identifier of the network element.
27. The method of claim 20, wherein learning at least one virtual circuit identifier of the customer premises equipment comprises receiving traffic from the customer premises equipment containing the at least one virtual circuit identifier of the customer premises equipment and storing the at least one virtual circuit identifier of the customer premises equipment.

28. The method of claim 20, further comprising:
monitoring the first reference point and a second reference point, that is located on
the network side of the network element, for activity;
when no activity is detected at the first or second reference points starting a timer;
and
when the timer has reached a predetermined amount of time terminating the
translation connection.
29. A method of automatically configuring a permanent virtual circuit in an ATM
network, the method comprising:
detecting communication initiation of an ATU-R;
receiving at least one virtual circuit identifier of an ATU-C;
learning at least one virtual circuit identifier of the ATU-R; and
creating a translation connection between the ATU-R and the ATU-C.
30. The method of claim 29, further comprising validating the at least one virtual
circuit identifier of the ATU-R as defined by a valid permanent virtual circuit database.
31. The method of claim 29, wherein detecting communication initiation of an ATU-
R comprises detecting communication initiation of an ATU-R at a first reference point
32. The method of claim 29, further comprising:
monitoring a permanent virtual circuit created by the translation connection; and
when the at least one virtual circuit identifier for the ATU-R changes, recreating
the translation connection using the changed virtual circuit identifier for the ATU-R.
33. The method of claim 32, further comprising validating the changed at least one
virtual circuit identifier as defined by a valid permanent virtual circuit database.

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34. The method of claim 32, further comprising:
when the number of changes of at least one virtual circuit identifier of the ATU-R reaches a predetermined number of changes terminating the translation connection.
35. The method of claim 29, wherein receiving at least one virtual circuit identifier of the ATU-C comprises receiving a message from an associated network containing the at least one virtual circuit identifier of the ATU-C.
36. The method of claim 29, wherein learning at least one virtual circuit identifier of the ATU-R comprises receiving traffic from the ATU-R containing the at least one virtual circuit identifier of the ATU-R and storing the at least one virtual circuit identifier of the ATU-R.
37. The method of claim 31, further comprising:
monitoring the first reference point and a second reference point, that is located on the network side of the ATU-C, for activity;
when no activity is detected at the first or second reference points starting a timer;
and
when the timer has reached a predetermined amount of time terminating the translation connection.
38. A communication network, comprising:
an access network;
a central unit selectively coupled to the access network;
customer premises equipment selectively coupled to the central unit; and
an automatic permanent virtual circuit (PVC) connection activation function embedded within the central unit, wherein the automatic PVC is enabled when the customer premises equipment is initialized and is adapted to create a translation connection between the customer premises equipment and the central unit.

39. The network of claim 38, further comprising a network interface between the customer premises equipment and the central unit.
40. The network of claim 38, wherein the customer premises equipment comprises an end user device selectively coupled to a remote unit.
41. An ATM network, comprising:
an access network;
a DSLAM selectively coupled to the access network;
an ATU-R selectively coupled to the DSLAM; and
an automatic permanent virtual circuit connection activation function adjunct to the DSLAM that is enabled by the communication initiation of the ATU-R.
42. A method of automatic permanent virtual circuit connection activation, the method comprising:
detecting initiation of communication at a user network interface between a first and a second network element;
receiving at least one virtual circuit identifier of the first network element;
learning at least one virtual circuit identifier of the second network element; and
creating a translation connection between the first and second network elements.
43. The method of claim 42, wherein learning at least one virtual circuit identifier of the second network element, comprises:
monitoring traffic between the first and second network elements for any type of virtual circuit identifier transmitted from the second network element; and
identifying the at least one virtual circuit identifier of the second network element in the traffic.
44. The method of claim 42, further comprising:
monitoring a permanent virtual circuit created by the translation connection;

when the at least one virtual circuit identifier of the second network element changes, creating a new translation connection using the virtual circuit identifier of the second network element.

45. The method of claim 44, further comprising:

when the number of changes of virtual circuit identifiers of the second network element have reached a predetermined number of changes terminating the translation connection.

46. The method of claim 42, further comprising:

monitoring the user network interface and a network node interface, that is located on the network side of the first network element, for activity;

when no activity is detected at the user network interface or the network node interface starting a timer; and

when the timer has reached a predetermined amount of time terminating the translation connection.

47. The method of claim 42, wherein receiving at least one virtual circuit identifier of the first network element comprises receiving a message from an associated network containing the at least one virtual circuit identifier of the first network element.

48. The method of claim 42, wherein learning at least one virtual circuit identifier of the second network element comprises receiving traffic from the second network element containing the at least one virtual circuit identifier of the second network element and storing the identifier.

49. A method of automatic permanent virtual circuit connection activation, the method comprising:

detecting initiation of communication at a user network interface between a first and a second network element;

- learning at least one virtual circuit identifier of the first network element;
learning at least one virtual circuit identifier of the second network element; and
creating a translation connection between the first and second network elements.
50. The method of claim 49, further comprising:
monitoring a permanent virtual circuit created by the translation connection; and
when the at least one virtual circuit identifier of the second network element
changes, creating a new translation connection using the changed virtual circuit identifier
of the second network element.
51. The method of claim 50, further comprising:
when the number of changes of virtual circuit identifiers of the second network
element have reached a predetermined number of changes terminating the translation
connection.
52. The method of claim 49, further comprising:
monitoring the user network interface and a network node interface, that is located
on the network side of the first network element, for activity;
when no activity is detected at the user network interface or the network node
interface starting a timer; and
when the timer has reached a predetermined amount of time terminating the
translation connection.
53. The method of claim 49, wherein learning at least one virtual circuit identifier of
the first network element comprises receiving traffic from the first network element
containing the at least one virtual circuit identifier of the first network and storing the at
least one virtual circuit identifier of the first network element.
54. The method of claim 49, wherein learning at least one virtual circuit identifier of
the second network element comprises receiving traffic from the second network element

containing the at least one virtual circuit identifier of the second network element and
storing the at least one virtual circuit identifier of the second network element.

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